

## Lead Scientist's Report

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**Summary:** This report provides reminders about two upcoming science events, the 6<sup>th</sup> Biennial Bay-Delta Science Conference and the Delta Independent Science Board's inaugural meeting. This report also contains an overview of the science behind the State Water Resources Control Board's (State Board's) Delta Flow Criteria.

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### Upcoming Science Events

- **2010 Bay-Delta Science Conference**
  - The Biennial Bay-Delta Science Conference (formerly known as the CALFED Science Conference) will be held September 27-29, 2010 at the Sacramento Convention Center.
  - The Plenary Session is scheduled for the morning of Monday, September 27, 2010.
  - Delta Stewardship Council members are invited to attend the 2010 Bay-Delta Science Conference.
  - For more information about the 2010 Bay-Delta Science Conference please see the conference website: <http://www.baydeltascienceconf.com>
- **Delta Independent Science Board**
  - The Delta Independent Science Board will hold its inaugural meeting on September 30, 2010 from 8:30 a.m. to 5 p.m. and October 1, 2010 from 8:30 a.m. to 4 p.m. (starting the day after the Bay-Delta Science Conference). The meeting will be held in the Delta Room at 650 Capitol Mall. Members of the Delta Stewardship Council are invited to attend.

### Science behind the State Water Resources Control Board's Delta Flow Criteria

At the last Council meeting the State Water Board presented their Delta Flow Criteria report. This is a follow-up to that presentation to expand on the role of the Science Program and the "Delta Environmental Flows Group" in the State Water Boards flow criteria development process.

State Water Board staff selected technical experts to participate in Delta Environmental Flows Group for the purpose of providing scientific information and technical advice related to Delta environmental flow issues. The Delta Environmental Flows Group consisted of professors, researchers, and staff from various resource agencies including the Delta Science Program's Interim Lead Scientist, Cliff Dahm, and Senior Engineer, Chris Enright. At the March 22-24, 2010 proceeding, the Delta Environmental Flows

Group initiated the technical discussion with a series of presentations including their five key points on Delta environmental flows. The expert panel also participated in topic-based panel discussions in the subject areas of hydrology, pelagic fish, anadromous fish, other stressors, and hydrodynamics.

Below is a summary of the Delta Environmental Flows Group's five key points and recommendations.

- 1) *A strong science program and a flexible management regime are essential to improving flow criteria.*
  - Apply adaptive management with emphasis on integration, synthesis, and action
- 2) *Environmental flows are more than just volumes of inflows and outflows.*
  - Focus also on timing, duration, frequency, and rate of change of flows
- 3) *Recent flow regimes both harm native species and encourage non-native species.*
  - Increase flow variability and habitat complexity across estuarine landscapes to better support native species
- 4) *Flow is a major determinant of habitat and transport.*
  - Improve flows that connect floodplains; consider biological relevance of in-delta net channel flows; consider higher seasonal outflows to provide more variable habitats for native fish communities
- 5) *Recent Delta environmental flows are insufficient to support native Delta fishes for today's habitats.*
  - Restore habitat and change flow patterns concurrently

The State Board incorporated the Delta Environmental Flows Group's five key points in its Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem report. The State Board also incorporated scientific information gathered through collaboration with the California Department of Fish and Game (CDFG) on the development of species life history requirements and with the UC Davis Delta Solutions Group on the subject areas of habitat variability, flow prescriptions, and ecosystem investments. Portions of the State Board's draft report were reviewed by CDFG, the United States Fish and Wildlife Service and the National Marine Fisheries Service. The State Board's final report includes elements of the best available science through the incorporation of peer reviewed literature, scientific expert opinion and guidance, and informal external review. The Delta Flow Criteria report and related papers are posted on the Council's web site (<http://www.deltacouncil.ca.gov>).

## **Contact**

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